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The use of metadiscourse and persuasion: An analysis of first year university students' timed argumentative essays

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ABSTRACT

This study attempts to obtain a better understanding of the way first-year university students construct persuasive arguments in writing by exploring their pattern of use of metadiscourse. A total of 181 argumentative essays produced by first-year university students while completing a timed writing task were analyzed by drawing upon the interpersonal model of metadiscourse as the analytical framework. The findings indicate that, while writers of low-rated essays differ significantly from those of high-rated ones only in the use of a few metadiscourse markers, they have problems using metadiscourse in constructing convincing arguments. Our study suggests that direct and explicit teaching and learning of metadiscourse should be implemented at both secondary education and at the early stage of tertiary education to enable students to use metadiscourse effectively in creating convincing arguments in English academic writing.

Keywords: metadiscourse, academic writing, persuasion, argumentation, first-year university students

1. Introduction

The use of metadiscourse in academic writing has gained considerable research attention (e.g. Aull & Lancaster, 2014; Hyland & Tse, 2004; Hyland, 2004; Lee & Deakin, 2016; Mur Duenas, 2007). This may be attributed to the fact that metadiscourse can function to persuade by making appeals to rationality, credibility and character, and emotions (Hyland, 2005a). In other words, with metadiscourse, writers can realize the three means of persuasion as suggested by Aristotle (2010) e logos, ethos, and pathos.

Metadiscourse has been construed and defined in different ways. For example, it is regarded as resources that convey a secondary level of meaning of a text in that it helps readers to "connect, organize, interpret, evaluate, and develop attitudes towards the materials" (Vande Kopple, 2002, p. 93). That is, it does not contribute to the propositional meaning e the primary level of a text. The construal of metadiscourse as non-contributory towards the propositional meaning of a text is strengthened by Mauranan's (1993) non-integrative approach to metadiscourse. This approach makes a clear distinction between metadiscourse and proposition, and takes metadiscourse as only functioning to help the writer to organize a text. This metadiscourse-proposition distinction, however, has been criticized for its inability to explain the change in the propositional meaning of a text when metadiscourse is removed from it (Hyland & Tse, 2004). Instead of being secondary to the propositional meaning of a text, metadiscourse has been also regarded as linguistic resources writers could use to intrude in the text to interact with the reader (Crismore & Farnsworth, 1990; Hyland, 2005a), and to shape their propositions to create texts that are coherent and convincing (Hyland & Tse, 2004). Metadiscourse, with which writers can interact and convince readers, is taken to be interpersonal in nature and defined as:

> "[T]he cover term for the self-reflective expressions used to negotiate interactional meanings in a text, assisting the writer (or speaker) to express a viewpoint and engage with readers as members of a particular community" (Hyland, 2005a, p. 37).

An interpersonal model of metadiscourse consisting of interactive and interactional categories has been proposed based on the definition (Hyland, 2005a, p. 49):

Interactive metadiscourse functioning to help to guide readers through the text:

- Transitions: express relations between main clause, e.g. *in addition, but, thus*
- Frame markers: refer to discourse acts, sequences or stages, e.g. *the aim is, in conclusion*
- Endophoric markers: refer to information in other parts of the text, e.g. *as mentioned above, in the next paragraph*
- Evidentials: refer to information from other texts, e.g. *XX argued that, according to YY*
- Code glosses: elaborate propositional meanings, e.g. *that is, for example, in other words*

Interactional metadiscourse functioning to involve readers in the text:

- Hedges: withhold commitment and open dialogue, e.g *may, probably, I guess*
- Boosters: emphasize certainty or close dialogue, e.g. *certainly, in fact*
- Attitude markers: express writer's attitude to propositions, e.g. *(un)fortunately, (un)deniably*
- Self mentions: refer to the writer explicitly, e.g. *I, we (exclusive), our*
- Engagement markers: build relationship with readers explicitly, e.g. *you, we (inclusive), note* ...

Apart from the metadiscursive-propositional distinction and the writer-reader interaction, Hyland (2005a, p.38) has also emphasized that metadiscourse "refers only to relations which are internal to the discourse", echoing Mauranen's (1993) and Adel's (2006) notion of language reflexivity. In other words, metadiscourse should be restricted to those linguistic units that describe language, or text, but not the world outside of the text. The sentence below, taken from the data of the present study, will illustrate this point. Preceding this sentence is a series of propositions explaining why the writer objected to the sug-

gestion that university students should take subjects unrelated to their chosen discipline.

> "Such unnecessary requirement would consequently erode the unique value of universities and deprive those tertiary education receivers' autonomous right that they deserve. Therefore, the suggestion should never be put in practice. Therefore, the suggestion should never be put in practice." [Essay 47]

There are altogether four potential metadiscourse markers: *Therefore*, *suggestion*, *should*, and *never*. The transition marker *Therefore* serves to link the preceding and succeeding texts by specifying that the two text units have a "consequence relation" (Hyland, 2005a, p. 50). The booster *never* serves to show the writer's desire to emphasize certainty and close down alternatives (Hyland, 2005a, p. 53). The hedge *should* expresses the writer's reservation about the proposition e the writer could have instead chosen to emphasize his/her commitment by using *must* in place of *should*. The noun *suggestion*, which could function metadiscursively if it refers to the act of suggesting made earlier or later in the text. However, 'suggestion' in fact refers to requiring students to take subjects unrelated to their chosen discipline, a suggestion that had been made in the real world before the student wrote the text. Therefore, it refers to a text-external entity and is not considered a metadiscourse marker in this study.

Research in the use of metadiscourse in academic writing has explored a range of academic genres including research articles, postgraduate dissertations, and undergraduate essays. These research studies show that persuasion in English academic discourse can be achieved by making the logical relationship between clauses explicit and signposting the development of the text with interactive metadiscourse in various academic genres: research articles (e.g. Khedri, Heng, & Ebrahimi, 2013; Hyland, 2007; Mur-Dueñas, 2011), postgraduate dissertations (e.g. Basturkmen & Randow, 2014; Hyland & Tse, 2004), and undergraduate academic essays (e.g. Li & Wharton, 2012). It also shows that interactional metadiscourse can be used to achieve persuasion by making the writer's stance clear and engaging the readers in these academic genres (e.g. Gillaerts & Van de Velde, 2010; Hong & Cao, 2014; Hyland, 2004; Lee & Deakin, 2016; Mur Duenãs, 2007).

Research in the language usage of undergraduate academic essays is another recent research focus. Yang and Sun (2012) studied how second-year and final-year students used cohesive devices in their essays. Some of the devices studied such as pronouns and conjunctions could in fact serve a metadiscursive function. It was found that the final-year students used more cohesive devices and demonstrated a higher level of accuracy than the second-year students. Wu (2007) discussed how first-year university students used boosters, hedges, and transitions (which corresponded respectively to concur/pronounce, entertain, and deny in Wu's study) to engage the reader. It was found that writers of high-rated scripts showed a higher frequency to moderate their hypotheses with hedges and to develop their points with transitions; and those of low-rated essays used boosters more frequently in an attempt to emphasize the validity of their claims. Hinkel (2003) compared essays written by native English (NS) speaking university students and those by non-native English speaking (NNS) ones. It was found that the NNS students used both boosters and hedges (termed amplifiers/emphatics and downtoners respectively in Hinkel's study) significantly more frequently than NS. Some studies compared the use of metadiscourse in essays written by first-year students and more experienced academic writers and some conflicting results were obtained. In Aull (2015) and Aull and Lancaster (2014), first-year students studying in two U.S. universities were asked to write an essay in response to an expository essay within one week. They were found to use more boosters than hedges, and the opposite was true for the senior year students of the same universities. However, Lee and Deakin (2016) found that first-year students of various written English proficiency levels (those who scored A or B grade in the essays analyzed) and different L1s (Chinese or English) used hedges significantly more frequently than boosters.

The present study aims to obtain a better understanding of the way first year university students construct persuasive arguments in writing by investigating their patterns of use of metadiscourse in argumentative essays produced during a controlled situation e a timed English language examination. Timed, controlled argumentative essays were chosen for three reasons. First, students writing such essays were not able to seek assistance from external resources such as teachers, peers or the Internet; they could only rely on their own metadiscursive (and other linguistic) knowledge. Second, essays produced in controlled conditions have not yet been fully examined in previous research (Basturkmen & Randow, 2014). Third, it is likely that metadiscourse is used in argumentative essays whose primary aim is to persuade (Williams, 1989).

This paper investigates first the pattern of use of metadiscourse in first-year university students' argumentative essays, and second the correlation between the frequency of use of metadiscourse and the scores first-year university students' argumentative essays are awarded. Previous research has found that high-rated essays, when compared with low-rated ones, were characterized with a higher frequency, a larger variety, and a higher grammatical accuracy of use of metadiscourse markers (Intaraprawat & Steffensen, 1995; Simin & Tavangar, 2009). In this paper, we will also focus on the effective use of metadiscourse; that is, we will qualitatively analyze the extent to which the student writers could make appeals to rationality, credibility, and emotion in ways that are expected and/or conventional with their use of metadiscourse. This study will attempt to answer the following research questions:

1. What is the pattern of use of metadiscourse in first-year L2 university students' argumentative essays?
2. What is the correlation, if any, between the grade an argumentative essay is awarded and the frequency, variety, and effective use of metadiscourse?
3. How do high-rated and low-rated argumentative essays differ in the frequency, variety, and effective use of metadiscourse?

2. Methods

2.1. Data collection

The present study analyzed timed argumentative essays written by first-year ethnic Chinese students from different faculties and schools (in mixed classes) of a university in Hong Kong during a 2.5-h English language examination. Apart from this writing task, the examination required students to complete a number of other tasks testing their reading ability and knowledge of vocabulary and grammar. The suggested time for the writing task was 35 min during which the students were required to write an argumentative essay in not less than 300 words in response to one of the following writing prompts:

1) University students should be required to take some subjects which have little relevance to their own major. To what extent do you agree or disagree with this statement?
2) These days more men and women are entering professions that have traditionally been reserved for the other sex (such as men becoming nurses or kindergarten teachers; women working as pilots or truck drivers). Do you think this is a positive or negative development?
3) In Hong Kong culture, money is the key to happiness. Do you agree or disagree with this statement?
4) Globalization and international travel have brought a huge increase in the number of marriages of people from different races and cultures. Discuss the advantages and disadvantages of this marriage trend, and give your own opinion.

The English final examination was an institutional requirement to all students who take *University English* as one of the GE (General Education) core courses. The essays were rated by course instructors according to the marking rubrics that these instructors developed. Standardization meetings for marking take-home argumentative essays during the semester were held. Raters were, therefore, considered very close to each other in terms of the application of the rubrics.

The assessment rubrics focused on three major inter-related rhetorical competencies, namely content, language and organization (see Appendix I). There were altogether five bands, ranging from Excellent to Fail (in letter grade, A, B, C, D, and F, with D grade being the marginal pass). Students were provided with all the assessment criteria (there were other course assessments too) at the beginning of the semester so they were aware of the measurements. The rubrics had been used for previous take-home and in-class argumentative essay practices so students were familiar with the performance expectations and assessment criteria.

A total of 200 essays were collected for analysis in the study, but only 181 of these essays were analyzed as the scores of the other 19 essays were not shown clearly. The numbers of essays attempted in response to the four different prompts were 92 for prompt (1), 29 for prompt (2), 51 for prompt (3), and 9 for prompt (4). While it is possible that the prompts would have an effect on the choice of words (Miller, Mitchell, & Pessoa, 2016) and thus the use of metadiscourse (e.g. Prompts 1 to 3 would probably lead to a more frequent use of the self mention token *I*), we have decided not to investigate such effect for two reasons. First, the small number of essays using prompt (4) would make it unlikely to yield meaningful statistical results. Second, according to Ädel (2006, p. 203), since these essays all belong to the argumentative genre and that it is unclear how topics will affect metadiscourse use, we could accommodate the "possibly skewed results in studies of metadiscourse".

The total number of words was 83,570, and the average length of an essay was 461. We further divided the essays into three main parts (for conducting qualitative analysis, please see Section 3.2), namely Introduction, Body, and Conclusion. The total and average length of these three parts were: Introduction (total - 14,483, average - 80), Body (total - 61,491, average - 340), and Conclusion (total - 7,776, average - 43).

2.2. Data analysis

All the essays, 181 in total, were read and coded manually by the two authors and another researcher with reference to Hyland's (2005a) interpersonal model of metadiscourse. In the coding process, we did not rely solely on the list of potential metadiscursive expressions suggested by Hyland (2005a) for three main reasons: (1) the list is by no means exhaustive; (2) the decision as to whether a particular linguistic expression is metadiscursive or not should be made in context; and (3) writers are novice L2 academic writers and as such, they may be using "unorthodox" features not recorded in previous studies. We have therefore only used Hyland's (2005a) metadiscourse model, but not the list of potential metadiscursive expressions, as the analytical framework. We read the text and identified metadiscursive expressions with reference to his definition of metadiscourse and we followed his classification and typology of metadiscourse. Consensus on the criteria for identification of metadiscourse markers, as well as the metadiscourse-propositional content distinction, was reached among the three raters at the beginning of the analysis by coding 10 essays randomly selected out of the 181. Expressions which performed a metadiscourse function were highlighted, coded and labelled to reflect the category of metadiscourse to which the expressions belonged. The rest of the essays were then analyzed, coded and labelled according to the agreed criteria by the three raters individually (a list of all the linguistic expressions coded as interactive or interactional metadiscourse is shown in Appendix II). An inter-rater reliability of 92% was obtained and discrepancies were reconciled and resolved afterwards. A section of a coded essay is shown below to illustrate the coding and labelling[1]:

Extract 1

To conclude (*Frame Marker*), forcing students to take some subjects which are little relevant to their major, not only (*Transition Marker*) reduces their time concentrating on major study, but also (*Transition Marker*) harms one's learning motivation. To large extent (*Hedge*), I (*Self Mention*) disagree (*Attitude Marker*) with the adoption of the above (*Endophoric*

Marker) practice.

Correlational analysis using SPSS was performed to determine if there was a significant correlation between the scores awarded to the content, language, and organization (and the overall total) of an essay and the frequency of use of the various categories of metadiscourse. The statistical analysis was followed by a more focused qualitative analysis of the 10 highest-rated and 10 lowest-rated essays aiming to identify the characteristics of high- and low-rated essays in terms of patterns of use of metadiscourse.

3. Findings and discussion

Section 3.1 reports and discusses the quantitative findings: Sections 3.1.1 and 3.1.2 discuss the way the subjects of the present study used metadiscourse in their academic writing and where appropriate, reference will be made to the distribution of metadiscourse in introduction, body, and conclusion of the essays. Section 3.1.1 focuses on the interactional metadiscourse, and Section 3.1.2 on the interactive metadiscourse (addressing Research Question 1). Section 3.1.3 presents the statistical results showing the relationship between the scores awarded to the essays and the use of metadiscourse (addressing Research Question 2). Section 3.2 presents a qualitative analysis exploring in depth the use of metadiscourse by writers of high-rated essays and low-rated essays (addressing Research Question 3).

3.1. Quantitative analysis

Table 1 shows the frequency of use of the various categories of metadiscourse in the 181 argumentative essays analyzed, and Table 2 shows the distribution of metadiscourse in the three main parts of an essay e introduction, body, and conclusion. The normalized frequency (per 1000 words) is shown in brackets.

Table 1 shows that the first-year university students used more interactional than interactive metadiscourse e the normalized frequencies were respectively 43.6 and 30.9. Such a difference can also be observed in Table 2 which shows that interactional metadiscourse was the more frequently used category in all the three different parts of the essay. Among the interactive categories, transitions were used most frequently recording a normalized frequency of 22.4. The next two most frequently used categories were frame markers and code glosses, trailing behind transitions by a large margin (the normalized frequencies observed were respectively 4.1 and 3.6). The last two were endophoric markers and evidentials with normalized frequencies standing at respectively 0.6 and 0.1. Among the interactional categories, engagement markers topped the list (with a normalized frequency of 16.2), followed by hedges (normalized frequency at 11.2), boosters (normalized frequency at 7.0), self mentions (normalized frequency at 5.9) and lastly attitude markers (normalized frequency at 3.4).

Like the present one, a few other studies have also reported a stronger preference for interactional than interactive metadiscourse (e.g. Aull & Lancaster, 2014; Aull, 2015). Aull (2015) and Aull and Lancaster (2014), however, differed from the present study in that their first-year university students were required to complete a simulated academic writing task before they started their first semester of study at university e they were allowed a few days to write an essay by responding to a prompt at home so they could refer to any source of information for the task.

The stronger preference for interactional metadiscourse, however, is in fact not a common phenomenon in academic writing. Previous research has reported a more frequent use of interactive than interactional metadiscourse in various kinds of academic writing produced by more advanced writers: argumentative essays by final year university students (Crismore, Markkanen, & Steffensen, 1993; Li & Wharton, 2012), master's or doctoral dissertations by postgraduate students (Hyland, 2004), and research articles by academics (Hyland, 1998; Mu, Zhang, Ehrich, & Hong, 2015). In other words, the first-year university students of the present study demonstrated some degree of deviation from the prevalent discursive practice of academic writing in terms of the differential preference for the two main categories of metadiscourse. It should be noted, however, the present study differed from these other ones in a number of aspects e academic level (first-year students vs. final-year/postgraduate students/academics), genre (argumentative essays vs. dissertations/research articles), and conditions in which the writing was produced (timed vs. untimed). These differences might have affected the writers' preference for interactive and interactional metadiscourse.

3.1.1. Use of the interactive metadiscourse

3.1.1.1. Transitions and frame markers. Transitions recorded the highest frequency of use in different parts of the essays. This should be expected as students would need to make explicit the relations between clauses if they were to persuade their readers in a logical manner. Among the three types of transition markers e addition, comparison, consequence (Hyland, 2005a, p. 50), comparison was the most preferred type (806 out of 1875), followed by consequence (600 out of 1875) and then addition (469 out of 1875). The most preferred token of these types were 'but' for comparison, 'so' for consequence, and 'and' for addition. These tokens were most preferred probably because of their syntactical simplicity and thus ease of use. Other studies of academic writing also witnessed transitions being the most frequently used in English academic discourse (Hyland, 2004; Lee & Casal, 2014; Li & Wharton, 2012; Mu et al., 2015).

The pattern of use of frame markers was interesting in that this interactive metadiscursive device recorded the highest frequency in the conclusion, the part which was usually considerably shorter than the body and thus did not require much

signposting (achieved through using frame markers). This should be attributed to the frequent formulaic use of expressions like *To conclude*, *To sum up*, and *In conclusion* at the very beginning of the concluding paragraph.

Table 1
Frequency of use of metadiscourse.

Interactive	Transitions	Frame markers	Endophoric markers	Evidentials	Code glosses
2579	1875	346	50	10	298
(30.9)	(22.4)	(4.1)	(0.6)	(0.1)	(3.6)
Interactional	Hedges	Boosters	Attitude markers	Self mentions	Engagement markers
3647	933	589	281	493	1351
(43.6)	(11.2)	(7.0)	(3.4)	(5.9)	(16.2)

Table 2
Metadiscourse distribution.

	Introduction (14,483 words)	Body (61,491 words)	Conclusion (7776 words)
Interactive	298 (20.6)	1930 (31.4)	352 (45.3)
Transitions	241 (16.6)	1470 (24.0)	164 (21.1)
Frame markers	8 (0.6)	168 (2.7)	170 (21.9)
Endophoric markers	15 (1.0)	24 (0.4)	11 (1.4)
Evidentials	0	10 (0.2)	0 (0)
Code glosses	33 (2.3)	258 (4.2)	7 (0.9)
Interactional	787 (54.3)	2467 (40.1)	393 (50.5)
Hedges	183 (12.6)	676 (11.0)	74 (9.5)
Boosters	110 (7.6)	413 (6.7)	66 (8.5)
Attitude markers	94 (6.5)	127 (2.1)	60 (7.7)
Self mentions	193 (13.3)	203 (3.3)	97 (12.4)
Engagement markers	207 (14.3)	1048 (17.0)	96 (12.3)

3.1.1.2. Endophoric markers, evidentials and code glosses. Endophoric markers and evidentials recorded a very low normalized frequency of occurrence e only 0.6 and 0.1 respectively. Endophoric markers were used sparingly since the average length of the essays was just 461 words, making it not really necessary to direct the readers to different parts of the text. Evidentials were used even more sparingly as the essays were written during an examination where students did not have access to any outside source of information to which they could refer. Code glosses, despite their higher frequency of use than endophoric markers and evidentials, did not record a frequency comparable to other markers. This suggests that the students did not use terms which needed further illustration for readers to understand, or did not see the need to elaborate propositional meanings through reformulation or exemplification to a large extent. Students' understanding of the context of interaction may be at play too as they were addressing examiners who are more knowledgeable.

3.1.2. Use of the interactional metadiscourse

3.1.2.1. Hedges and boosters. The first-year university students of the present study showed a stronger preference for hedges than boosters e the normalized frequency of use of hedges was 11.2 and that for boosters was 7.0. Similar preferences were reported in studies analyzing academic writing produced by more advanced and expert academic writers (e.g. Hyland, 1998; Lee & Casal, 2014; Li & Wharton, 2012), suggesting that the students of the present study were also aware of the importance of showing simultaneously uncertainty and confidence while making an argument (Skelton, 1988), thus making the essay more persuasive (Lee & Deakin, 2016).

The stronger preference for hedges than boosters could also be attributed to the time constraint the students were subjected to. They were suggested to have only 35 min to finish the writing task in the final examination (though individual students could decide to spend more or less on each task), allowing students only limited time pondering over the best way to present ideas in written English. This could probably lead to the use of more interactional, spoken features in the text which normally takes shorter time than producing a text with the usually more polished and sophisticated written features. Some common interactional features found in our corpus include hedges (e.g. in my view/opinion, as far as I'm concerned, personally speaking). That the time constraint could be a contributing factor to the stronger preference for hedges may find support from Aull's (2015) study in which first-year university students, who were allowed a few days to complete a writing task, used fewer hedges than boosters, and expended more efforts in the logical progression of the propositions in the text.

Table 2 shows an interesting phenomenon. The students hedged least frequently but boosted most frequently in the conclusion. This suggests that the students found it necessary to appear to be more assertive after presenting their thesis statement in the introduction and arguments in the body, and they could then end the essay in a stronger tone supporting the stance they had argued for in the preceding paragraphs.

3.1.2.2. Self mentions, attitude markers and engagement markers. Self mentions and attitude markers were used frequently in both introductions and conclusions where the writer needed to make explicit his/her stance. This could explain the high frequency of co-existence of self mentions, attitude markers, hedges, and boosters as these metadiscursive devices could express the writer's stance (Hyland, 2005c).

The students of the present study showed a considerably stronger preference for engagement markers than academic writers of other studies (in fact, they engaged the reader frequently throughout the whole essay, as Table 2 shows). They used 16.2 engagement markers per 1000 words, outnumbering those first-year university students in Lee and Deakin (2016), the final-year students in Li and Wharton (2012), the postgraduate students in Lee and Casal (2014) and Hyland (2004), and academics in Mu et al. (2015) by two to four times. One reason for this phenomenon could be the frequent use of rhetorical questions to engage the reader by the subjects of the present study e among the 1351 engagement markers used in the

corpus, 184 of them were rhetorical questions, giving a normalized frequency of 2.2. The corresponding figure (per 1000 words) obtained elsewhere were significantly lower: it was 0.25 in Lee and Deakin (2016) and 0.38 in Hyland (2005b). This frequent use of rhetorical questions could be attributed to two factors. First, like hedges discussed above, it could be attributed to the time constraint to which the students were subjected to, resulting in the higher use of interactional, spoken features. Second, it could be attributed to the fact that the students had been exposed to model argumentative essays which contained rhetorical questions.

3.1.3. Statistical results

Statistical analysis shows that only the interactional metadiscourse markers hedges, attitude markers, and engagement markers had significant correlation with the scores. Hedges had significant positive correlation with the scores for content ($r = 0.253$, $n = 181$, $p = 0.001$), language ($r = 0.176$, $n = 181$, $p = 0.018$), organization ($r = 0.218$, $n = 181$, $p = 0.003$), as well as the overall score ($r = 0.245$, $n = 181$, $p = 0.001$) Attitude markers correlated positively with the content score ($r = 0.187$, $n = 181$, $p = 0.012$) Engagement markers showed a relatively weak negative correlation with the overall score ($r = -0.151$, $n = 181$, $p = 0.042$). Table 3 below shows the frequency of use of metadiscourse markers in the 10 highest-rated and 10 lowest-rated essays (the corresponding normalized frequencies are shown in brackets).

The figures in Table 3 illustrate the statistically significant findings in that higher-rated essays contained more hedges and attitude markers, but fewer engagement markers than the lower-rated ones (the differences in the frequency of use of other categories of metadiscourse markers did not reach statistical significance).

The significant correlation between the frequency of use of hedges and the scores awarded to the various aspects of the essays, and between the frequency of use of attitude markers and the content scores, supported previous research which found that high-rated essays contained more interpersonal elements (e.g. Intaraprawat & Steffensen, 1995). The use of hedges, as research has suggested, could effectively convey to readers the writers' reservations about their own propositions, and could therefore clearly show their stance or value positions towards the issue they were arguing for or against (Abdollahzadeh, 2011; Aull & Lancaster, 2014; Aull, 2015; Lee & Deakin, 2016), and also leave space open for different stances and viewpoints. Writers' ability to indicate their position through expressing their stance effectively would probably be awarded a higher score as a writer's position is a vital component in an argumentative essay (Wingate, 2012). Attitude markers were another interactional resource that high-rated essays (in the content aspect) contained more than low-rated ones did. Similar findings were observed in Intaraprawat and Steffensen's (1995) study. This interactional metadiscourse resource could contribute to the content of an essay since they allow writers to express opinions towards the propositional content of an essay (Hyland & Tse, 2004) and that they are "pragmatic connectives which express the writers' affective values" (Abdollahzadeh, 2011, p. 290). The positive and negative correlations observed would therefore indicate that when compared to low-rated essays, high-rated essays contained more linguistic traces of evidence (i.e. more hedges and attitude markers, and less engagement markers respectively) of the student writers' ability to anticipate and respond to the readers' alternative views. They could then produce more sophisticated and more persuasive arguments.

A smaller number of engagement markers were found in high-rated essays than in low-rated ones. As will be discussed further in Section 3.2 (Extract 3), the larger number of engagement markers used in low-rated essays was in fact the result of using the same few types of such markers repeatedly in the same essay (e.g.*you* and *your*). Those used in high-rated essays were more varied and more sophisticated in their grammatical constructions.

3.2. Qualitative analysis

Qualitative analysis was conducted to explore the pattern of use of metadiscourse by first-year students in their attempts at making the arguments in their essays persuasive. We will see how writers of high-rated essays and writers of low-rated essays differed in their metadiscourse use pattern. The ten essays awarded the highest scores (at or above 24 out of 30)

Table 3
Frequency of use of metadiscourse in 10 highest-rated and 10 lowest-rated essays.

	Highest-rated (3894 words)	Lowest-rated (4026 words)
Interactive		
Transitions	107 (27.5)	101 (25.1)
Frame markers	16 (4.1)	26 (6.5)
Endophorics	5 (1.3)	3 (0.8)
Evidentials	1 (0.3)	0 (0)
Code glosses	20 (5.1)	20 (5.0)
Interactional		
Hedges	64 (16.4)	41 (10.2)
Boosters	28 (7.2)	31 (7.7)
Attitude markers	17 (4.4)	11 (2.7)
Self mentions	14 (3.6)	16 (4.0)
Engagement markers	55 (14.1)	131 (32.5)

and the ten awarded the lowest (at or below 16 out of 30) were analyzed qualitatively. While both interactive and interactional metadiscourse would be discussed, more emphasis would be placed on the latter as the use of three of the five categories of its markers e hedges, attitude markers, and engagement markers e showed significant differences between the high- and low-rated essays. These three categories of metadiscourse markers were further sub-categorized in the analysis for a more comprehensive analysis. Hedges, according to Halliday and Matthiessen (2004), could be sub-categorized as:

- modal auxiliaries (e.g. *may, might, could*);
- modal adjuncts (e.g. *perhaps, probably, maybe*);
- modal attributes (e.g. *it's possible that …, it's likely that …*);
- mental verb/attribute projections (e.g. *I suspect that …, I'm convinced that …, I wonder …*); and
- circumstances (e.g. *to a certain extent, in my opinion*)

Engagement markers, according to Hyland (2005a), could be sub-categorized as:

- rhetorical questions (e.g. *Have you ever considered …?*);
- directives (e.g. *imagine that …, consider …*); and
- pronouns (e.g. *you, inclusive-we*)

Attitude markers could be categorized as Hyland (2005a):

- attitude verbs (e.g. I *agree*, I *prefer*);
- sentence adjectives (e.g. *It is unfortunate that …*)
- sentence adverbs (e.g. (*Un*)*fortunately*, our bid was unsuccessful)

Tables 4 and 5 show the variety of these three interactional metadiscourse markers used in respectively the 10 highest-rated and 10 lowest-rated essays:

Tables 4 and 5 show that high-rated essays contained a wider variety of the three interactional metadiscourse markers than low-rated essays. Nine of the 10 highest-rated essays contained at least three different types of hedges; and among these nine essays, two contained four types (essays 106 and 120) and one even contained all five (essay 47). The 10 lowest-rated essays, however, contained only up to two types of hedges. Similar patterns of use of engagement markers and attitude markers were observed in these two groups of essays: more highest-rated essays used more types of these two interactional metadiscourse markers than the lowest-rated essays did. A closer reading of the metadiscourse markers used in the lowest-rated essays revealed that the main types of hedges used were modal auxiliaries like *would* and *may*, the main type of engagement markers used was pronouns like *we* and *you*, and the main type of attitude markers used was the 'agree' type. These preferred metadiscourse expressions were lexicogrammatically simpler than the other identified ones which appeared considerably more frequently in the highest-rated essays. In other words, high-rated essays differed from low-rated ones in two ways. First, they contained a wider variety of metadiscourse categories, as illustrated in Tables 4 and 5; second, they contained more sophisticated metadiscourse expressions and grammatical patterns. Take hedges as an example. Writers of low-rated essays tended to use single word metadiscourse markers such as modal verbs like *would* or *may* (see Extract 2, Essay 43 below), which does not demand a high level of lexical and grammatical competence of the writer as they are all common modal verbs that tend to be used in the same position of a simple SVO structure. Writers of high-rated essays, in contrast, had much richer metadiscoursal resources at their disposal in terms of variety and sophistication, and they could use them with a higher appropriacy (e.g. *moreover* for an additional point, rather than *on the other hand*, if the second proposition is not a contrast). These resources could be either single words or phrases, in different parts of speeches, and playing different grammatical functions in a sentence, which demands a higher command of language competency. Such a difference in variety,

Table 4
Variety of hedges, engagement markers, and attitude markers in high-rated essays.

Essay	Hedges					Engagement markers			Attitude markers		
	mod	adjun	attr	proj	circum	quest	direct	pron	vb	adj	adv
47	✓	✓	✓	✓	✓	✓		✓	✓		
48	✓	✓		✓		✓		✓			
94				✓	✓			✓			
102	✓	✓				✓	✓	✓			
103	✓	✓			✓	✓	✓	✓	✓	✓	
106	✓	✓		✓	✓		✓		✓		✓
118	✓	✓		✓							
120	✓		✓	✓	✓				✓	✓	✓
136	✓			✓	✓					✓	
177	✓			✓	✓			✓			

Table 5
Variety of hedges and engagement markers in low-rated essays.

Essay	Hedges					Engagement markers			Attitude markers		
	mod	adjun	attr	proj	circum	quest	direct	pron	vb	adj	adv
3	✓				✓			✓			
6	✓			✓					✓		
23	✓				✓	✓		✓		✓	
37	✓					✓		✓			
39					✓			✓	✓		
43	✓			✓		✓		✓		✓	
55				✓	✓			✓			
56	✓	✓				✓		✓	✓	✓	
99	✓					✓		✓	✓		
164	✓										

Legend: mod - modal auxiliaries; adjun - modal adjuncts; attr - modal attributes; proj - projections; circum - circumstances; quest - rhetorical questions; direct - directives; pron - pronouns; vb - attitude verbs; adj - sentence adjective verbs; adv - sentence adverbs.

sophistication and appropriacy of the lexicogrammar of the metadiscourse expressions used was also observed in previous research (Hinkel, 2005; Intaraprawat & Steffensen, 1995). Extracts 2 to 4 below show some instances of use of hedges, engagement markers, and attitude markers in the highest-rated essays and lowest-rated essays. We can see that those extracts taken from highest-rated essays all contained metadiscourse expressions that are wider in variety and more sophisticated in grammatical functions and construction.

Extract 2 e use of hedges (only hedges are highlighted)

a) [essay 47, score 25/30, high-rated] And presumably (*Modal adjuncts*) that is the reason why some suggest that university should require their students to take some elective subjects other than major-related ones. However, is it necessary to force them to do so? In my view (*Circumstances*), it is not a wise course of action since it would (*Modal auxiliaries*) deprive university students' freedom to learn and the effectiveness as to (…) them to be all-rounders is doubtful (*Modal attributes*).
b) [essay 43, score 16/30, low-rated] Opponent may (*Modal auxiliaries*) argue that it is wasting time to study these subjects, because they may (*Modal auxiliaries*) not use these knowledge in the future. In future, they may (*Modal auxiliaries*) use the knowledge which is not relate to their own major. For example, a doctor may (*Modal auxiliaries*) not use the history when they are working.

Extract 2a outperformed 2b in terms of lexicogrammatical variety and sophistication of the hedging expressions used. In terms of variety, four types of hedges were used in 2a but only one in 2b. In terms of sophistication, we can see in 2a first the use of the adverb *presumably* (functioning as a modal adjunct), which is a hedge skillfully placed at sentence initial position, preempting an assumption expressed in a declarative statement. Then there was the phrase *In my view* (functioning as the circumstances), limiting the claims in the forthcoming stance statement and acknowledging other possible alternative views. The use of the modal verb *would* (functioning as a modal auxiliary) that followed is a careful rhetorical crafting. The writer started with a strong non-negotiable statement *it is not wise* … but immediately negotiated the supporting evidence presented with a modal verb (*since it would deprive* …), making the argument more persuasive. Imagine if we exchange the positioning of hedges and write "It would not be wise … since it deprives …", there will be a lack of agreement in the level of certainty expressed in the main clause and subordinate clause. That is to say, there should not be such a hedge in the main clause if the supporting evidence is presented as a fact (… it deprives …). Another skillful use was the hedge *doubtful* in the form of an adjective (functioning as a modal attribute), expressing a gentle refutation against the presented argument. The positioning of the hedges in 2a also demonstrated a greater variety e we can find hedges in sentence-initial position (*presumably*, *In my view*), mid-sentence position (*may*), and final position (*doubtful*).

In contrast, in 2b, the same modal verb *may* was used in all the four instances of hedging. Needless to say, it is lexically monotonous and there is hardly any demand in syntactic variation, not to mention the lack of style.

Extract 3 e use of engagement markers (only engagement markers are highlighted)

a) [essay 102, score 25/30, high-rated] Imagine (*Directives*) you (*Pronouns*) have one million dollars worth of cash in possession, would you (*Pronouns*) be happy? (*Rhetorical questions*) Perhaps you (*Pronouns*) would considering that money is a pursuit that lead to wealth, that allows us (*Pronouns*) to expand our (*Pronouns*) collection of designer goods in modern civilization.
b) [essay 39, score 14/30, low-rated] In my opinion, your (*Pronouns*) heart is the key to happiness but not money. Money is just a factor that affect your (*Pronouns*) happiness. How many food you (*Pronouns*) buy, it is also can full your (*Pronouns*) stomach, but not your (*Pronouns*) heart. How many big house you (*Pronouns*) live, you (*Pronouns*) can also sleep on one

bed. How many money you (*Pronouns*) have, you (*Pronouns*) also can live a one life. Money cannot buy any time from God. You (*Pronouns*) cannot avoid regretting things you (*Pronouns*) did, but you (*Pronouns*) are no more chance to change, no matter how many money you (*Pronouns*) have

The writer of Extract 3a used a total of three different types of engagement markers in his/her attempt to involve the readers in the text e directives, pronouns, and rhetorical questions. In other words, s/he was able to engage the readers by (1) making them perform an act, a cognitive one in this case as in *Imagine you have one million dollars worth of cash in possession*; and (2) addressing them directly using *you*, and establishing solidarity with them through the *inclusive us* and *our*, demonstrating the writers' ability to make reference shifts promptly while still maintaining a high grammatical accuracy. The writer was then able to create "a sense of immediacy with the reader" (Hyland, 2005a, p. 373). The writer of Extract 3b, in comparison, was considerably more monotonous in his/her choice of engagement expressions e s/he only used either *you* or *your*, which is a good example of the overuse of engagement marker and explains the negative correlation with high-rated essays.

Extract 4 e use of attitude markers (only attitude markers are highlighted)

a) [essay 120, score 24/30, high-rated] This is essential ('*adjective*' type) to the development of their critical thinking and … More importantly ('*adverbial*' type), it is to expand their vision about the world …. I agree ('*agree*' type) with this statement.

b) [essay 56, score 15/30, low-rated] I agree ('*agree*' type) with this statement based on three reasons …. It is very important ('*adjective*' type) equipped our next generation with different kinds of knowledge, … I agree ('*agree*' type) that university students should courses that have little relevance to their own major.

Similar to the last two extracts, Extract 4 shows that the high-rated essay contained a wider range of expressions to mark attitude e the 'adjective' type, 'adverbial' type and 'agree' type were used. The low-rated essay only contained two e the 'adjective' type and 'agree' type.

It was mentioned earlier in this section that writers of high-rated essays demonstrated the ability to use metadiscourse expressions of not only a wider variety, but also a higher level of grammatical sophistication. A close reading of the essays revealed that these writers could also use metadiscourse more appropriately and effectively than those of low-rated essays. The following three pairs of extracts of a high-rated one and a low-rated one and the discussion that follows will illustrate this point. There three pairs, respectively representing the introduction, body paragraph and conclusion will be discussed in turn.

Extract 5 below compares the introductory paragraphs of the two essays on a topic about choice of university subjects. The high-rated ([a] in each extract) one was essay 47, with a score of 25/30; and the low-rated one ([b] in each extract) was essay 23, with a score of 15.

5a) [high-rated] Being university students nowadays, we (*Engagement Marker*) are often told the importance of being all-rounded. Indeed *(Booster),* open and modern cities, such as (*Code Gloss*) our (*Engagement Marker*) hometown Hong Kong, are demanding workers who have skills and knowledge in different fields. And presumably (*Hedge*) that is the reason why some suggest that university should (*Hedge*) require their students to take some elective subjects other than major-related ones. However (*Transition*), is it necessary to force them to do so? (*Engagement Marker*) In my view (*Hedge*), it is not a wise course of action since (*Transition Marker*) it would (*Hedge*) deprive university students' freedom to learn and the effectiveness as to … them to be all-rounders is doubtful (*Hedge*).

Extract 5a was arguing against the notion of requiring students to take subjects that were of little relevance to their chosen field of major study. With the booster *Indeed*, it introduced and acknowledged the reader's probable alternative or opposing view which was illustrated with the code gloss *such as*. The writer further showed his/her acknowledgement of the reader's value position by building solidarity with the reader using the engagement marker *inclusive our*. After presenting this opposing view, the writer did two things to prepare readers for his/her own view. First, s/he weakened the opposing view with the hedge *presumably*; second, s/he preceded his/her own view with a rhetorical question which was introduced into the text by the transition marker *However*, announcing to the reader that the writer was going to counter-argue what had just been presented. Anticipating strong objection from the reader, the writer hedged three times in a row in the last sentence of the extract when presenting his/her own view. Metadiscourse has been used effectively in the writer's attempt to persuade by making appeals to logos (with the use of *However* and *since* to signal logical relationship between clauses, and *such as* to exemplify to facilitate understanding), ethos (with the use of *Indeed* to emphasize his/her respect for the reader's view, *presumably* to tactfully weaken the view, and *In my view*, *would*, and *doubtful* to express his/her cautiousness and willingness to have a dialogue with the reader concerning his/her own view), and pathos (with the use of *inclusive we/our* to signal to the reader that they were bonded and affiliated).

b) [low-rated] Have you (*Engagement Marker*) ever been bored with your (*Engagement Marker*) little-relevance subjects in your *(Engagement Marker)* school life? (Engagement Marker) Do you *(Engagement Marker)* think it is an useless

requirement to take such subjects? (Engagement Marker) My (*Self Mention*) today's topic is all of above (*Endophoric Marker*). From my point of view (Hedge), I (*Self Mention*) do (*Booster*) think (*Booster*) it is essential (Booster) to take subjects which have little relevance to our (*Engagement Marker*) own major. In so doing, we (*Engagement Marker*) would (*Hedge*) benefit from two aspects such as (*Code Gloss*) ability and interests.

Extract 5b shows a higher use of metadiscourse than Extract 5a. However, such a use was not as effective and appropriate on three occasions. First, the writer engaged the readers by asking two rhetorical questions which were followed immediately by a short statement announcing the goal of the essay. While this structure was not problematic, the use of the endophoric marker *all of above* in the announcement did not present a proper reference. Only two issues were introduced by the rhetorical questions e bored by subjects which were of little relevance to one's study and the uselessness to study such subjects. The use of *all of* was therefore marked. The second occasion concerned the inappropriate use of boosters and hedges which created an inconsistency in the writer's level of conviction of his/her view. The writer qualified his/her view by stating that it was only his/her view using *From my point of view* (a hedge), followed by the consecutive use of three boosters: *do*, *think*, and *essential*. This showed that the writer had a very strong view and belief e that students should take subjects which had little relevance to their own major. However, the writer failed to acknowledge alternative views,
leading to failing to convince the readers of his/her opinion because of the uncertainty present in the statement "In so doing, we would benefit from two aspects …" e s/he expressed strong reservation with the strong hedging device *would*. The inconsistency in the level of conviction expressed through the inappropriate use of hedges and boosters observed here would probably weaken the writer's appeal to ethos. The last occasion on which metadiscourse was not used appropriately concerned the use of the code gloss *such as*. The writer argued that students would benefit from taking less relevant subjects in two aspects which were immediately presented e ability and interests. That is, the writer was in fact specifying, but not exemplifying, the aspects s/he had in mind. The use of the code gloss *such as* which served to exemplify was therefore inappropriate.

Extract 6 shows how arguments were presented in the body paragraphs of the two essays.

6a) [high-rated] Universities are different from any primary and secondary schools mainly (*Hedge*) because (*Transition Marker*) of the freedom entitled to their students, which may (*Hedge*) be eroded by that course of action suggested. Those who are receiving university education, supposedly (*Hedge*), are already adults or ready to be adults. They do not need too much guidance from others, nor any requirements. Since (*Transition Marker*) they have to be autonomous as to the knowledge they want to learn and the life they want to live. Forcing an adult to learn like a pupil is definitely (*Booster*) unreasonable *(Attitude Marker)* even if we (*Engagement Marker*) attempt to do so for their own good. By no means (*Booster*) should (*Hedge*) we (*Engagement Marker*) look down on those advance education receivers who are capable of critical thinking and able to make their own choice. Such an unnecessary requirement would consequently (*Transition Marker*) erode the unique value of universities and deprive those tertiary education receivers' autonomous right that they deserve. Therefore (*Transition Marker*), the suggestion should (*Hedge*) never (*Booster*) be put in practice.

The writer of Extract 6a demonstrated the way the writer appealed to ethos by striking a fine balance between certainty and reservation, and the willingness and unwillingness to have a dialogue with the readers. A series of three hedges were used in the first two sentences to withhold his/her commitment to the propositions and to acknowledge or even invite alternative viewpoints from the reader. Such an expression of reservation and willingness to have a dialogue with the reader was followed by one of certainty and an unwillingness to have a dialogue with the reader. A series of three boosters were used to emphasize that (1) it was unreasonable to impose on an adult as if s/he were a child; (2) the writer and the reader (collectively referred to by the engagement marker *inclusive we*) should not look down on university students who were capable of thinking critically and making their own choice; and (3) university students should not be required to take any irrelevant subjects. Apart from ethos, the writer has also effectively appealed to logos and pathos with metadiscourse. The appeal to logos was achieved by the appropriate use of transition markers *because* and *Since*, indicating to the reader that a reason for the preceding proposition was forthcoming, a typical analytical pattern of a causal relationship; *consequently* told the reader explicitly that what followed was the consequence of what came before; and finally *Therefore* served to signal to the reader that a conclusion made based on the preceding propositions would follow. The appeal to pathos was mainly achieved by building solidarity with the reader through the use of the engagement marker *inclusive we* on two occasions.

6b) [low-rated] For the first part ability (*Frame Marker*), I (*Self Mention*) would like to (*Frame Marker*) take an example. Students from all over the world take foundation courses of all subjects in their first year study. Why? (*Engagement Marker*) Because (*Transition Marker*) students in their year one haven't developed their study skill and social skill, which means (*Code Gloss*) they do not have the ability to go further study. They need to take more courses to fullfil themselves. What is more (*Frame Marker*), through taking little-relevance courses, students have more chance to communicate with others, which also (*Transition Marker*) trains their social ability, as well as the study ability.

Extract 6b presents two major problems that deserve our closer attention – the misuse and non-use of metadiscourse. The last two instances of use of metadiscourse illustrate the misuse issue. The claim that year one students had not developed their study skills and social skills does not mean that they did not have the ability to further study, although one might argue that the inadequacy in study skills and social skills could lead to the inability to further study. The use of the code gloss *which means* was therefore inappropriate. The writer then went on to say that through taking less relevant subjects, the students could improve themselves (or "fulfil themselves", as the writer put it). The seemingly second supporting evidence that students needed to take more courses to improve themselves was, in fact, more or less a repetition of the first one – to improve their "social ability as well as study ability", rather than an additional point, as signaled by *What is more*. The writer mistakenly backgrounded the key information in a prepositional phrase (*through taking little-relevance courses*) but foregrounded the secondary information (*have more chances to communicate with others*) in the main clause, which makes the intended meaning more confusing. *What is more* here is an obvious misuse.

Non-use of metadiscourse refers to an instance in which the writer did not use any metadiscourse marker when s/he should have used one in order to avoid problems such as confusion in cohesion or over-generalizations, which is a logical fallacy. In Extract 6b, non-use of a metadiscourse marker has occurred at least three times. The writer committed herself/himself fully to three of his/her propositions where in fact s/he should have hedged: *Students from all over the world take foundation courses of all subjects in their first year study*, … *students in their year one haven't developed their study skill and social skill,* …, and … *they do not have the ability to go further study*. In the three propositions, there was not only a sweeping generalization – *students from all over the world* – but an absence of negotiation about the truth value of these propositions. Such unpackaged absolute claims have largely weakened the argument presented, likely triggering ready objections from the reader. The writer's ethos would be weakened or even damaged, resulting in a lower power of persuasion ofthe arguments.

Extract 7 below shows the concluding paragraphs of the two essays.

7a) [high-rated] Bases on the above (*Endophoric Marker*) argument, the proposed requirement should (*Hedge*) not be adopted. We (*Engagement Marker*) should (*Hedge*) not over-estimate the effectiveness of forcing students to learn but (*Transition Marker*) under-estimate their desire to be free to learn.

The writer of the extract signaled to the reader the closing of the essay with the expression *Base(d) on the above*, with an embedded endophoric marker *the above*, followed by two moderately hedged concluding statements with the hedging marker *should* – the writer could have sounded more certain by using *can* – the certainty of a negative proposition would be the highest when the modal "cannot" is used, according to Halliday and Matthiessen (2004, p. 148). Such a level of hedging was appropriate as it echoed the balanced use of boosters and hedges in the body paragraph, as Extract 6a shows. A stylish rhetorical contrast was set up summarizing the main argument in a clear and concise manner with the transition marker *but*. The writer has therefore written an effective conclusion facilitated by the appropriate use of metadiscourse.

7b) [low-rated] To sum up (*Frame Marker*), taking no-relevance subjects takes us (*Engagement Marker*) to a higher level to learn this world and (*Transition Marker*) it must (*Booster*) be essential (*Attitude Marker*) to develop your (*Engagement Marker*) ability and interests by taking no-relevance subjects.

The writer of Extract 7b was able to signal his/her discourse act of bringing the essay to the end with an appropriate frame marker *To sum up*. The use of other metadiscourse markers, however, were problematic. First, the engaging perspective was shifting for no obvious reasons and appeared arbitrary – the *inclusive us* used in the first part of the sentence was abandoned and replaced with *your* later in the same sentence. Second, the decision to emphasize with first a high modality *must* and the attitude marker *essential* seemed to be erroneous. The modal *must* could be replaced with *is* and the resulting clause *it is essential* would be a more proper expression for making the emphasis.

From the analyses above, we can see that it is not the number or even the variety of metadiscourse resources that matter most in the construction of a persuasive text. Rather it is the accurate or inaccurate choices (e.g. *such as* in 5b) of metadiscourse markers that signal the intended relationship; it is the sound judgement or mis-judgement (e.g. 6b above) of whether a full or partial commitment needs to be made to a statement with the use of metadiscourse markers; it is the consistency or inconsistency (e.g. shifting pronoun references in 7b) in the positioning of and engagement with the reader; it is the interaction between metadiscourse markers, especially in a longer and more complicated discussion, and the reinforcement of one another (or the missing of them, as illustrated by the incompatibility of the booster and hedge in 5b above)in various ways that make a text more crafted and convincing, or less so.

4. Conclusion

This study has attempted to obtain a better understanding of the way first year university students constructed persuasive arguments in writing by exploring their pattern of use of metadiscourse in times argumentative essays. The

focus of the study was two-fold: first, the correlation between the frequency of use of the various categories of meta-discourse and the scores awarded to the essays; second, the way writers of high-rated essays (those whose essays scored at least 24 out of 30) and writers of low-rated essays (those whose essays scored 16 or below out of 30) differed in terms of the grammatical accuracy, appropriacy and effectiveness of metadiscourse use. Our statistical results indicated that essay scores only correlated with the frequency of use of three categories of interactional metadiscourse, with hedges and attitude markers showing a positive correlation, and engagement markers showing a negative one. The qualitative analysis showed that while both writers of high-rated essays and writers of low-rated essays used metadiscourse in different parts of an argumentative essay e introduction, body paragraph, and conclusion, the former demonstrated a higher ability to use the resources in two aspects: lexicogrammar and rhetorical functions. In terms of lexicogrammar, they had a larger repertoire of metadiscourse expressions with both simple and complex constructions, and they were more skillful at deploying such resources in a stylish manner, e.g. in various sentence positions (initial, middle and end). In terms of rhetorical functions, writers of high-rated essays could make effective appeals to logos, ethos, and pathos with metadiscourse expressions that were grammatical and appropriate, which enhanced the persuasiveness of their arguments and the essay as a whole. In addition, high-rated essays could more effectively manage the interaction between and reinforcement of metadiscourse markers. Writers of low-rated essays did not demonstrate such level of mastery of metadiscourse (Basturkmen & Randow, 2014).

Our methodological triangulation through conducting first quantitative analysis and then qualitative analysis has allowed us to realize that the frequency of use of metadiscourse alone did not seem to have a sizable positive impact on the score of an essay e high- and low-rated essays did not differ significantly in terms of frequency of use of all the categories of interactive metadiscourse and two of the five categories of interactional metadiscourse (boosters and self mentions), a phenomenon at odds with previous research (e.g. Gholami, Nejad, & Pour, 2014; Intaraprawat & Steffensen, 1995). It has also allowed us to realize that a high frequency of use of metadiscourse would need to be coupled with an ability to use the resource in an appropriate manner if one is to make effective appeals to logos, ethos, and pathos in persuasive academic writing in English. Such a frequency-appropriacy combination was observed in high-rated essays but not in low-rated ones. Variety of meta- discourse markers is also found to be a salient feature of persuasive academic writing that is positively related to the score ofthe essay.

The study has an important pedagogical implication: direct and explicit teaching and learning of metadiscourse should be introduced and encouraged at secondary education and at the early stage of tertiary education. The problematic use of metadiscourse in English academic writing by L2 first-year university students we have seen was in fact produced by those who had just left secondary school. Their ineffective use of metadiscourse might be a consequence of an insufficient input of metadiscourse knowledge during their secondary education. Such insufficiency in input could be attributed to the lack of emphasis by teachers, curriculum, and writing textbooks on the forms and functions of metadiscourse (Crismore et al., 1993; Hyland, 2005a; Intaraprawat & Steffensen, 1995; Li & Wharton, 2012). Novice academic writers, as suggested by Mu et al. (2015, p. 144), should therefore be "explicitly taught how to use metadiscourse in their academic writing". To enable novice academic writers, especially those weaker ones, to use metadiscourse effectively in constructing persuasive arguments, the teaching and learning of metadiscourse should aim at the use the various categories of interactive and interactional metadiscourse rhetorically (Crismore et al., 1993).

Future research could address three issues. First, an equal or at least similar number of essays for each prompt should be collected so that we will be able to investigate the effect of writing prompts on the pattern of use of metadiscourse. Second, the representativeness of the data and the generalizability of the findings can be enhanced by also including argumentative essays of first year students of other universities in Hong Kong. Third, readers' perception can be made another key factor in determining the persuasiveness of an essay. This can be achieved by interviewing teachers who have read and graded the essays. It is hoped that these lines of research will allow us to better understand the problems and needs of novice academic writers who construct persuasive texts, and to address them effectively.

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Appendix I

Marking Criteria	Excellent (A) 10-9 marks	Good (B) Satisfactory (C) 8 marks 7 marks 6 marks		Marginal Pass (D) 5 marks	Fail (F) 4-0 marks
Content: thesis statement, arguments, major ideas and supporting evidence	• Demonstrates a very good understanding of the essay topic. • Shows a very clear thesis statement, with clear arguments and refuted counterarguments. • Presents very relevant evidence to support the arguments.	• Demonstrates a good understanding of the essay topic. • Shows a clear thesis statement, with arguments and counterarguments refuted to some extent. • Presents relevant evidence to support the arguments.	• Demonstrates a reasonable understanding of the essay topic. • Shows a thesis statement, with some arguments and un-refuted counterarguments. • Presents some relevant evidence to support the arguments.	• Demonstrates a marginal understanding of the essay topic. • The thesis statement is not clearly stated, or there is no thesis statement. There are some arguments, but no counterarguments. • There is little evidence to support the arguments.	• Demonstrates little or no understanding of the topic. • The thesis statement and arguments/counterarguments cannot be identified. • There is insufficient or inadequate evidence to support the argument.
Language: grammar accuracy, sentence structure and vocabulary	• Demonstrates very good grammatical accuracy, with no grammar errors. • Uses a very wide range of sentence structures. • Uses a very wide range of vocabulary with precision.	• Demonstrates good grammatical accuracy though with a few errors. • Uses a wide range of sentence structures. • Uses a wide range of vocabulary with some precision.	• Demonstrates satisfactory grammatical accuracy, but with some errors. • Uses a satisfactory range of sentences structures, with minor errors that do not impede communication of ideas. • Uses a satisfactory range of vocabulary, with some vocabulary items not appropriate to the task.	• Demonstrates limited grammatical accuracy, with some serious grammar errors. • Uses a limited range of sentence structures, with frequent errors that impede communication of ideas. • Uses a limited range of vocabulary with significant errors.	• Demonstrates very limited grammatical accuracy, with frequent serious errors. • Uses a limited range of sentences, with errors which greatly impede communication. • Uses a very narrow range of vocabulary with major errors.
Organization: text structure (introduction-body-conclusion), paragraph structure (topic sentence and relevant supporting sentences), text coherence and cohesion	• Shows a very clear text structure, and well-sequenced material (topic sentence e supporting evidence) within the paragraph. • Shows extremely logical progression of ideas and very good use of cohesive devices. • The text communicates fluently to the reader.	• Shows a clear text structure, and sequenced material (topic sentence e supporting evidence) within the paragraph. • Shows very logical progression of ideas and good use of cohesive devices. • The text communicates quite fluently to the reader.	• Shows a fairly clear text structure, and reasonable sequence of material (topic sentence e supporting evidence) within the paragraph. • Shows mostly logical progression of ideas and often appropriate use of cohesive devices. • The text communicates to the reader although there is some strain.	• Shows an unclear organizational pattern, with introduction and/or conclusion missing or mixed up with other parts. • Shows somewhat unclear progression of ideas and limited use of cohesive devices. • The text causes a lot of strain for the reader.	• Shows no clear organizational structure. • Shows unclear progression of ideas and incorrect or nonexistent use of cohesive devices. • The text causes great strain for the reader

Appendix II

Expressions coded as interactive metadiscourse

Transitions

After all, although, and, apart from, as, as a result, at the same time, because, besides, but, by contrast, cause, consequently, conversely, despite of, even if, furthermore, hence, however, inversely, instead, in addition, in contrast, in reverse, in the other sides, in the same way, in this case, leads to, moreover, nevertheless, nonetheless, notwithstanding, not only … but also, on the contrary, on the contrast, on the other hand, otherwise, rather than, result in, similarly, since, so, so as to, so that, still, the result is, then, therefore, though, thus, what's more, whereas, while, whilst, yet

Frame markers

A further point, another point, another reason, finally, first, first and foremost, first of all, firstly, for the first part, for one thing, in the first place, last, last but not least, next, second, secondly, then, third, thirdly, to begin with, to commence with, to start with, to think this in another way

All in all, in a word, in brief, in conclusion, in short, in summary, my conclusion is, on a concluding note, on the whole, overall, taking everything into account, to conclude, to sum up, to summarize

Want to, what I want to point out is, would like to

As for my case, back to, when it comes to

Endophoric markers

Above, aforementioned, aforesaid, as I have mentioned, as I said, as mentioned beforehand, before, below, following, former, later, latter, mentioned, mentioned above, mentioned before, previous, previously

Evidentials

According to, it has been said that, as XX once argued, as XX mentioned

Code glosses

Called, e.g., for example, for instance, i.e., in fact, in another words, in other words, it means, known as, like, meaning, namely, or X, say, such as, that is, that means, this means, to make it concrete, to simplify, to put it simple, which means, take XX as an example

Expressions coded as interactional metadiscourse

Hedges

According to my own knowledge, almost, apparently, appear, approximately, argue, argued, argues, around, as far as I'm concerned, certain, claim, claimed, claims, could, doubt, doubtful, feel, feels, from my own angle/perspective/point of view, from the perspective of XX, from this perspective, generally, guess, hardly, have great doubt, inclined, indicate, indicated, indicates, in a great/large extent, in general, in my opinion, in my own point of view, in my view, in normal cases, in that case, in some cases, likely, mainly, may, maybe, merely, might, mostly, not entirely, often, partly, partially, perhaps, personally (speaking), possible, presumably, probably, quite, rather, relatively, seems, seemed, seemingly, should, sometimes, somehow, suggest, suggested, suggests, suppose, supposed, supposedly, supposes, tend(s) to, to a certain/large/little/low/small/some extent, unlikely, usually, would

Boosters

Absolutely, actually, always, be a well-known fact that, believe, believed, believes, beyond questions, by no means, certainly, clear(ly), deem, definitely, do, doubtless(ly), especially, evident, extremely, find, firmly, found, fully, highly, impossible, in a strong extent, in fact, indeed, know(s), must, never, no doubt, no point, obvious, of course, prove, proved, proves, realize(d), really, show(ed/n/s), significantly, staunchly, strong(ly), sure(ly), the fact is, think, to a very large extent, totally, true, truly, unarguably, undeniable, undeniably, under no circumstances, undoubtedly, unquestionably, utterly, very, without (a) doubt, worldwide known

Attitude markers

!, absurd, as everyone know, admitted(ly), against, agree, agreement, appropriate, be an ardent, supported, beneficial, crucial, disappointed, disagree, dispute, do not think, dramatically, essential, even worse, expected, feasible, fortunately, frankly, honestly, happy, important(ly), interestingly, lamentably, more importantly, necessary, no matter, object, of crucial importance, opt for, prefer(able), questionable, reasonable, remarkable, ridiculous, sadly, support, surprising(ly), tough, understandable, unfortunately, unnecessary, unsurprising, unusual, vital, wasting time, weird

Self mentions

I, me, my, our (exclusive), us (exclusive), we (exclusive)

Engagement markers

?, as we can see, add oil, assume, by the way, do not, imagine, let, must, our (inclusive), please, should, suppose, take a look, us (inclusive), we (inclusive), you, your

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